WHAT IS CLAIMED IS:

1.   An ADPCM decoder, wherein

an adaptive predictor which calculates the prediction signal from a quantization difference signal comprises:

bit developing means which receives said quantization difference signal separated into a mantissa part and an exponent part and bit-develops said mantissa part;

bit shifting means which bit-shifts said bit-developed mantissa part in accordance with a value of said exponent part;

overflow detecting means which is added to the most significant bit of said bit developing means and detects an overflow of said bit-shifted mantissa part; and

prediction signal output means which, when said overflow detecting means detects the overflow of said mantissa part, replaces said bit-developed mantissa part with a predetermined upper limit value and outputs it as said prediction signal and, when the overflow of said mantissa part is not detected, outputs said bit-developed mantissa part as it is as a prediction signal.

2.   The detector according to claim 1, wherein said prediction signal output means is

a selector which receives said predetermined upper limit value from one input terminal and said bit-developed mantissa part from another input terminal, selects said predetermined upper limit value when said overflow detecting means detects said overflow, selects said bit-developed mantissa part when said overflow detecting means does not detect said

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overflow, and outputs the selected upper limit value or the selected mantissa part from an output terminal.

3.   An ADPCM decoder, wherein

an adaptive predictor which calculates the prediction signal from a quantization difference signal comprises:

bit developing means which receives said quantization difference signal separated into a mantissa part and an exponent part and bit-develops said mantissa part;

bit shifting means which bit-shifts said bit-developed mantissa part in accordance with a value of said exponent part;

overflow detecting means which is added to the most significant bit of said bit developing means and detects an overflow of said bit-shifted mantissa part; and

muting processing means which, when the overflow of said mantissa part is detected, stops an output of decoding data of said ADPCM decoder.

4.   An ADPCM decoder, wherein

an adaptive predictor which calculates the prediction signal from a quantization difference signal comprises:

bit developing means which receives said quantization difference signal separated into a mantissa part and an exponent part and bit-develops said mantissa part;

bit shifting means which bit-shifts said bit-developed mantissa part in accordance with a value of said exponent part; and

overflow detecting means which is added to the most significant

bit of said bit developing means and detects an overflow of said bit-shifted mantissa part,

and when the overflow of said mantissa part is detected, decoding data of said ADPCM decoder is outputted via a predetermined low pass filter.

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